AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A method for inspecting defects, comprising the steps of:

illuminating light to an inspection object containing repetitive circuit patterns formed on a surface thereof;

detecting an image signal corresponding to transmission light by selectively shielding a diffraction light pattern generated from said repetitive circuit patterns when the illuminating light is reflected from the surface of said inspection object; and

detecting the defects existing on the surface of the inspection object by processing the detected image signal;

wherein said selective shielding of said diffraction light pattern in said detecting step is performed by using a micro-mirror array device~~ or a reflected type liquid crystal, or a transmission type liquid crystal, or an object which is transferred a shielding pattern to an optically transparent substrate, or a substrate or a film which is etched so as to leave shielding patterns, or an optically transparent substrate which can be changed in transmission by heating, sudden cold, or light illumination, or change of electric field or magnetic field, or a shielding plate of cylindrical shape or plate shape~~.

2. (Previously Presented) A method for inspecting defects according to claim 1, wherein said repetitive circuit patterns comprise a plurality of chips formed on the surface of said inspection object, and said selective shielding of the diffraction light

pattern is performed according to a change of the diffraction light pattern for every area in one chip obtained by detecting diffraction light patterns for one chip as a Fourier transform image.

3. (Cancelled).

4. (Currently Amended) An apparatus for inspecting defects comprising:

an illumination optical system which illuminates light to an inspection object containing repetitive circuit patterns formed on a surface thereof;

an optical detection system which detects light reflected from said inspection object and transmitted through a shield unit, and converts the detected light into an image signal; and

a processing system which detects the defects by processing the image signal detected by said optical detection system;

wherein said shield unit is provided in said optical detection system to selectively shield diffracted light patterns coming from the repetitive circuit patterns existing on the inspection object~~,~~ and said shielding unit comprises a micro-mirror array device ~~or a reflected type liquid crystal, or a transmission type liquid crystal, or an object which is transferred a shielding pattern to an optically transparent substrate, or a substrate or a film which is etched so as to leave shielding patterns, or an optically transparent substrate which can be changed in transmission by heating, sudden cold, or light illumination, or change of electric field or magnetic field~~.

5. (Previously Presented) An apparatus for inspecting defects according to claim 4; further comprising an optical observation unit which observes a Fourier transform image as diffraction light patterns for one chip in a Fourier transform plane, and wherein said repetitive circuit patterns comprise a plurality of chips formed on the surface of said inspection object, and said shielding unit selectively shields the diffraction light pattern in accordance with change information of the diffraction pattern for every area in one chip in the diffraction light patterns for one chip obtained by the optical observation unit.

6. (Canceled)

7. (Canceled)

8. (New) A method for inspecting defects according to claim 1, wherein selective shielding of said diffraction light pattern in said detecting step is performed by using the micro-mirror array device so that each micro-mirror operation of the micro-mirror array device selective shields the diffraction light patterns by reflecting the diffracted light in a direction where a sensor for detecting the image signal corresponding to the transmission light reflected by each micro-mirror operation cannot receive the selective shielding diffracted light patterns.

9. (New) A method for inspecting defects according to claim 8, wherein said selective shielding of said diffraction light pattern in said detecting step includes observing a Fourier transform image as the selective shielding diffracted light patterns in a Fourier transform plane and controlling each micro-mirror operation of

the micro-mirror array device in accordance with the Fourier transform image as the selective shielding diffracted light patterns.

10. (New) A method for inspecting defects according to claim 8, wherein each micro-mirror operation of the micro-mirror array device is performed so that the each micro-mirror operation is supported by a support provided on a base and is driven by electrostatic attraction and repulsion with an electrode provided on the base.

11. (New) An apparatus for inspecting defects according to claim 4, wherein said shielding unit further comprises an optical system wherein each micro-mirror operation of the micro-mirror array device selectively shields the diffraction light patterns by reflecting the diffracted light in a direction where a sensor for the detected light reflected by each micro-mirror operation of the micro-mirror array device into the image signal cannot receive the selective shielding diffracted light patterns.

12. (New) An apparatus for inspecting defects according to claim 11, wherein said shielding unit further provides an optical observation unit which observes a Fourier transform image as the selective shielding diffracted light patterns in a Fourier transform plane and a control unit which controls each micro-mirror operation of the micro-mirror array device in accordance with the Fourier transform image as the selective shielding diffracted light patterns.

13. (New) An apparatus for inspecting defects according to claim 11, wherein each micro-mirror operation of the micro-mirror array device is constructed so that

the each micro-mirror operation is supported by a support being provided on a base and is driven by electrostatic attraction and repulsion with an electrode provided on the base.